

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application No. 10/552,596

Confirmation No. 2502

Applicant: Wada et al.

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Commissioner for Patents
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DECLARATION UNDER 37 C.F.R. § 1.132 OF TORU WADA

I, Toru Wada, do hereby declare as follows:

1. I graduated from the University of Hokkaido, Faculty of Engineering, Department of Synthetic Chemical Engineering, in March of 1983.
2. I have been employed by Toyo Boseki Kabushiki Kaisha since April 1983. My work has primarily focused on the research and development of photosensitive polymers.
3. I am a co-inventor on numerous patents (e.g., U.S. Patent Nos. 7,097,957 and 6,558,870) and patent applications, including the present patent application.
4. At the time the subject patent application was filed, I was actively engaged in scientific research in the development of photosensitive polymers, including flexographic printing plates. I am aware of the general knowledge available in the art and of the skill level of the ordinary artisan as it exists today and as it existed at the time the present patent application was filed.
5. Pending claim 1 of the present patent application recites a photosensitive resin composition comprising

- (A) hydrophobic polymers obtained from at least two or more water dispersion latexes,
- (B) a photopolymerizable compound and
- (C) a photopolymerization initiator,

wherein

each of said two or more hydrophobic polymers is present in a fine particle state in the uncured composition,

the particle diameter distribution of the fine particles as the component (A) has two or more peaks, and

the ratio of respective particle diameters at the peaks is 2 times or more.

It is important for the uncured composition that the hydrophilic polymers are present in a fine particle state.

6. The measurements described in the specification at page 26, lines 10-24, were made after photo-curing in view of the handling properties of the uncured versus cured compositions. More specifically, the uncured composition is soft and not easily handled for measurements. In contrast, the photo-cured composition is harder and thus easier to handle, thereby allowing for easier measurement taking.

7. Although photo-curing may be accompanied by 2-3% contraction, the morphology of the fine particles does not change during photo-curing. The hydrophobic polymers present in a fine particle state contain butadiene double bonds. However, since the hydrophobic polymers have no photo-polymerizable double bonds, the polymers are not directly involved in the photo-curing reaction. I believe that, through the photo-curing reaction, the hydrophobic polymer fine particles are tangled by the photopolymerizable compound, such that the water-insolubility and other desirable characteristics for printing are imparted thereto. However, even during this process, the morphology of the fine particles does not undergo a change by the photo-curing reaction.

8. Under the circumstances, in my opinion, one of ordinary skill in the art would understand that the state of the fine particles in the composition can be confirmed by evaluating a cured product obtained by photo-curing a composition. Because the morphology does not change upon curing, the obtained measurements directly correlate to the uncured composition.

9. I hereby declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: Feb. 24, 2009

Toru Wada
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